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"FACTORS INFLUENCING THE USE OF ICT IN THE INDIAN EDUCATION SYSTEM"

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ABSTRACT

The evolution of humanity and advances in science and technology have allowed education to innovate its teaching processes and strategies with the purpose of maximizing our reach. The teaching-learning media have the opportunity to take advantage of information technologies and communication to provide a quality education service. As teachers, we face challenges that demand the application of our dedication and updating our knowledge. The new generations identify this trend and assume it to strengthen their academic preparation, which assesses the role of ICT in current study plans. The use of ICT in educations does not lie in the possible disappearance of the teacher, but in the modification, they have caused in the teaching methodology. It is obvious that the presence of computers in everyday life and, therefore, also in schools, is already a reality. What is required from now on is to integrate its use into the learning programming as one more resource, to be added to the existing ones. A resource that can facilitate teaching and become a tool certainly useful for students as well as teachers.

KEYWORDS: Information And Communications Technology, ICT, Education, Pedagogy, Teaching

INTRODUCTION

In the process of teaching-learning the application of ICT should be viewed as a advantage offered by technologies. Hernandez (2017) states that "Traditionally, in the education system of India, multimedia systems have been used very frequently, but the massive entry of ICT in some centres has made that teachers have a powerful tool to motivate students, although what is truly relevant and decisive will be the pedagogical use that teachers-mediators, make of them. However, one has to consider that a solid linguistic and methodological training is necessary, as well as support of experience, which should consider the skills, abilities and learning rhythms that students have and offer each student those methodological strategies that best suit their characteristics, considering their diversity.

Students need more and better support to be successful in their studies and develop the skills they need in their future jobs. Since there are cases of good practices in some subsystems, in general there is no clear awareness of the fundamental role of a quality education nor its importance is recognized. On the other hand, institutions rely heavily on teaching through master classes. Therefore, the presence of innovative interactive methods which involve students in different aspects, while internationalization initiatives are in early stages of development.

It is important to value the learning practices that are used currently in higher education, educational models, units of learning and the means of delivery, in the understanding that these must evolve, contribute to the motivation of students, generate skills, mastery of tools and better development and practice of their skills. In view of the challenges and changes that society faces, quality education must be a priority to promote transformation, so it is recommended to contribute to professional, useful and profitable training for a world inconstant evolution and innovation, where decision-making and the proposal of continuous improvement is often plagued with challenges which modify the entire environment and demand a versatility applied to the way education is imparted to the new generations.

A situation of change

We can start by pointing out that the educational system consisting of the current training environments are a consequence of the industrial revolution and therefore relatively recent in the history of mankind. The mode industrial production (division of labour, specialization, social institutions specialized) required forms of cultural transmission commensurate with the needs of that new industrialized society. The modern educational system constitutes one of the institutions that comes to act as a vehicle for transferring the culture of the old to the younger generations at a time when institutions previous (clans, guilds, patriarchal family) were being erased by the development of the new industrialized society, and in which culture itself also became more complex (Hernandez, 2017).

Just as the arrival of industrialized society brought about great transformations in the set of educational processes and cultural transmission, the arrival of a new society that we know as the information society, the society of knowledge, supposes great changes in these processes. And in this aspect, we can face the first reflections:

- The first may be about the very existence of the phenomenon of transferring of culture from the older to the younger generations, when in some fundamental respects of society, the opposite phenomenon can occur.

In the bosom of these contradictions, the irreversibility of the telecommunications phenomenon transmits the responsibility of preparing our students as consumers of information at work, in life and at leisure.

- Another reflection is given by the changes in the transfer of knowledge that is passing from the book as a symbol of knowledge and culture to television, the computer and the telephone ... As Simone says, in the Nowadays, the very meaning of the word read is much broader than it does twenty years: no longer only things written are read.
- And focusing on school work enormous slowness of the educational system to assimilate the cultural forms of society to which he has to adapt to individuals, giving the feeling that it adapts them not for the future, but for the past (Tolani-Brown et al., 2011).

Changes in learning scenarios, changes in the classroom

Without a doubt, the fundamental unit of educational space (the study hall or class) and the essential unit of time (likewise frequently alluded to as a class) are seen impacted by the development of new data advances in the educational field. The education brought into the world of industrialization has been portrayed up to now and comparable to the informative climate, by observing a law of three units: Unit of time, solidarity of spot and solidarity of activity (All in a similar spot, simultaneously, doing likewise learning exercises). This environment can be dangerous because the learning capabilities off all students are not equal and if a student doesn't understand a certain aspect then he or she gets left behind. ICT can address this issue and provide a levelling field to all students irrespective of their intelligence through its various tools.

The actual development of data innovations, in the setting characterized by a help society, presents new difficulties to education, since in the future getting and putting together data will turn into the essential movement prevailing for a huge piece of the populace. However, simultaneously as the ICT adds to the quick change that requires new abilities and changes in the targets, can add to their accomplishment and authority. While investigating the potential situations advanced by ICT, we should recognize among the progressions that might happen in the field of traditional education of those situations that are unequivocally improved by the educational utilization of organizations and that fall ideally in the field of adaptable teaching since distance.

In general, and with current technology, at least in the near future, it does not seem that they are going to influence basic and secondary education. Influence, in the sense of transforming the system completely. It will be introduced as one more resource, and more importantly as an important bank of resources, without causing major changes in the way of teaching. Constituting, a precious resource for both teachers and students. Perhaps this form constitutes the most positive contribution of ICT to basic education in India, for now.

Paradoxically, the main impact of ICT in the classroom may come from the informal learning experiences. It is fundamentally about the use of the information networks formed by electronic links between different teaching and learning communities to facilitate the acquisition of information and the construction of knowledge that represents an active form of learning are available on the Internet in autonomous learning processes: Contacts and exchanges with people (experts, colleagues, ...), access to institutional files formative, participation in discussion groups, moderate or not.

In short, access from a multimedia station (either from home, from classroom, cyber cafe, or community resource centre) to the various Networks can provide a multidirectional communication environment - synchronous and asynchronous- and a space -a cyberspace- that can reinforce collaboration and interaction and that can complement, simulate, and in some cases even enhance, the conventional class.

We are referring to virtual training environments and here we must attend both to the ways in which the media can restrict or allow certain types of interaction, as well as the process by which people are able to construct and negotiate meanings through interaction and collaborative activity.

In this sense, with the subsequent update, the proposal that we did in 1995 (Salinas, 1995), when talking about three scenarios that were configured due to the evolution of telecommunications networks and the potentialities that contributed to the training processes: Learning at home, learning on the job in a learning resource centre through the use of multimedia learning materials. To these three scenarios, we could currently add one characterized by the ubiquity of access to information and consequently to the learning resources and the promises it offers: learning anywhere place / any time.

The organizational circumstances in which each of these scenarios are situated determines access to learning materials and educational communication that is configured and that we can describe them as follows:

1. The home. The growing availability of cheap high bandwidth internet and infrastructure of the country, coupled with the growth of learning materials to disposition of users in different environments cause a growth of these types of learning, growth characterized by the degree of accessibility, productivity and quality.
2. The job. In this case, both the services of general nature of the network and generic training materials, such as specific materials from the company itself or from other institutions or consortia that can be accessed with a more or less restricted nature from the company.
3. Learning resource centres. It is also about the use of social communication technology for training purposes, to have technology specifically intended for learning. Thus, the importance of setting up shared resource centres (different educational fields, teleworking, institutional services, constitution of media libraries, etc.) that make the community's resources profitable increases. In others words, centres that offer diverse physiognomy, community centres, Internet cafes, act as learning resource centres, complementing and in many

cases replacing the other scenarios.

4. Ubiquitous technology. Although the technological evolution in this sector is vertiginous, it is important to spread the awareness about learning about new technologies in every household so that the percentage of people actually acquiring technical knowledge from an early age increases. This should be coupled with growing infrastructure like availability of high bandwidths internet all over the country so that even the students from the remotest parts of India can be a member of the learning community. This can be done through resource centres which offer free internet and computer classes to the poor and the needy who need it the most.

The perspectives offered by ICT for each of these scenarios implies changes in the organizational keys in terms of combination of the scenarios and the configuration of integrated learning services. These new services, based on the concept of electronic or online campus, would integrate the four described scenarios in the same training distribution system.

These are new ways of enriching and improving the quality of the curriculum and the training. In integrated training, services technology can link teachers and students of all educational levels - elementary, secondary, superior, as well as businesses and the community - and provide a broad variety of experiences, information, materials and communication possibilities. In short, it tries to increase educational opportunities.

Thus, together with exploitation as a source of resources within the educational institution, we must attend to the effect that the increasingly growing domestic access in formulas that may fall into the sphere of informal education, or in other scenarios that are constantly evolving. It's without doubt that Students who use the Internet, in either of the two formulas, benefit from several ways: they improve their contact with computers and technology; they learn to work in a transnational world; they unfold in other languages; they have access to thousands of previously unattainable information (databases, catalogues, museums, international job boards) (Tikam, 2013).

In this sense, it may be worth reflecting on some aspects related with the role of ICT in the classroom:

- Those projects and activities that involve the use of ICT, and fundamentally the Internet, contribute decisively to developing the interpersonal communication skills and stimulate mutual understanding between countries and cultures. All this can take on a special educational interest when it is necessary to access sources of information not available in the locality or that are changing.
- The daily use of ICT helps teachers and students to function in a world where the ability to manage and access information will be crucial, as stated. It also helps them develop the ability to learn independently, which they can then project onto other learning situations. In this sense, for example, it is a stimulus exceptional for advanced learners who can take part in activities, projects, conferences and debates and consult databases expressly designed for research projects carried out from educational institutions.
- Allows teachers and students isolated by personal conditions, geographic, social or economic, communicate with others and participate in common teaching-learning projects. Likewise, it is possible to group students from various institutions and share the teaching staff.
- Another element for reflection is the control of access to information. Undoubtedly, age determines the use of the Internet: In elementary school, Students often participate in directed projects that include the use of e-mail, while in advanced ages, a greater independence is imposed in the search for information. This older Independence is frequently viewed as a risk and consequently they promote filters and different systems of guardianship of adults. In any case, I would like to draw attention to the differentiation between 'accessing the network 'or to the Internet and' become part of a network.

Changes in the student's environment

The possibilities that ICTs offer in education leads to the emergence of new students characterized by a new relationship with knowledge and new practices of learning adaptable to changing situations. To achieve this type of flexibility, it is important to adapt to constantly changing situations, and respond to challenges that the evolution of technology, culture and society raises, will depend on the implementation of educational actions related to the use, selection, use and organization of information so that the student is learning as a mature citizen of the information society.

It is not about turning citizens into communications specialists, but that the culture of communication is in the basic training so that the person can better develop their individual and professional possibilities. The changes generate difficulties and uncertainties, but also new spaces for opportunities. That is why they have to adapt and create these new spaces.

At the same time, it is necessary to train teachers in the same address. That is: mastery of technologies (not to teach them, but as a user advantageous) and preparation for the role of guide and orientation in the use and consumption of the information.

In this context we can consider that an educated person should be a connoisseur, thinker and learner. In other words, being educated implies the acquisition of:

- Knowledge of a specific domain, which would include concepts, facts and procedures identified with a field of knowledge or with a subject.
- Generally useful cognitive skills, heuristic strategies (effective techniques and approaches for performing tasks, etc.) and control strategies (control of the process while the homework,).
- Learning strategies related to skills and desire to learn.

The traditional approach consists of accumulating the largest amount of possible knowledge. But in a rapidly changing world this is not efficient, not knowing if what is being learned will

be relevant.

Broader Review of the Literature on ICT

The World Bank, through its Information for Program Development scheme started a series studies around the world on the use of ICT. These studies employed a series of methodology, including secondary data research, conducting interviews of the government officials, academics, economists, country experts, teachers, students, industry and others. The secondary research involved using the works of the local government to gather information on policies, national budgets, demographic information, development programs, economic progress and employment. The structured interviews with the stakeholders provided complementary information. Many of these studies were conducted either as a set of continental or regional studies. In most cases, they involved studies that included many countries.

World Bank (2007) Conducted as a continental study, the Survey of ICT and Education in Africa covered the status of ICT in 53 countries. The survey was sponsored by donor countries and the Information for Development Program of the World Bank. The study focused on the following:

- Taking a snapshot of ICT in Africa
- How ICT is used
- Policies in place for ICT use
- Providing an illustration of ICT in various countries
- Issues and difficulties faced by various countries
- Getting the key aspects of the use of ICT
- Developing an online data base
- Determining the extent to which the industry and the developing countries are helping to prepare reports for the 53 countries (Shirazi et al., 2010)

This study by the World Bank on ICT and Education in the Caribbean was very similar to the earlier World Bank study on the use of ICT in Africa (Gaible. 2008). It looked at the status of ICT in primary, secondary and tertiary education. It also focused on utilizing secondary data combined with a set of face to face or phone interviews of the stakeholders. The secondary data came primarily from government reports, policy statements, country wise programs, donor reports on national funding and other published data. Some of the key aspects of the study were:

- Government policy on education
- Policy and planning process relating to education
- Curriculum development and implementation process
- Teaching and learning at the primary and secondary level
- ICT initiatives
- ICT hardware used
- University level education in the Caribbean
- Use of technology in university education
- Use of ICT in distance education in the Caribbean
- Virtual education in the Caribbean
- Training programs associated with ICT
- Projects initiated by external donors and funding agencies

The survey on ICT for Education in India and South Asia was conducted on behalf of the World Bank. Started in 2008 in Africa, it was followed by studies in the Caribbean Islands in 2009 and in South Asia in 2010 (Price Waterhouse Cooper 2010). The results of this study were reported in five parts. This is an important study for the current research in that it looked at five states of India and undertook case studies in those states to explore the practices in the use of ICT. It is also important in that it differs from the current study in terms of the research methodology employed. The highlights of the study are as follows:

- The methodology was to utilize data already available along with surveys
- It included interviews with stakeholders
- It also used workshops as a primary means to gather people and conduct interviews in select locations
- Because of the large geographic area covered and the population studied, the research method utilized was considered to represent an illustrative type than an exhaustive research
- The interviews were conducted in 2009 and 2010 on a technological topic that was changing rapidly
- The study found that important ICT initiatives were being taken to promote tertiary education than the primary or secondary education
- The study found that outstanding content was being developed under the ICT initiatives.
- Distance education, and vocational education were using extensive technology.

A UNESCO study done in 2011 on the use of ICT in schools in the Arab world included the following countries: Egypt, Jordan, Qatar, Oman, and Palestine (UNESCO, 2011). It was a comprehensive study that looked at the following issues:

- Infrastructure needed for ICT education
- Provisions for electric power and telecommunication
- Access to internet and computer infrastructure
- Types of computers and internet connections
- Curriculum that supports ICT use
- Teaching such subjects as science, mathematics, written communication, arts and second languages.
- ICT assisted instruction
- Labs for computers and networking
- Gender-wise enrolment in programs

CONCLUSION

The differences in the use of ICT, rather than between levels of education (the higher conventional education, bridging the gap, exploits the potential of the networks in a similar way as primary education does), we find them in the teaching situation: large group teaching and learning; tutorial work in small groups; unsupervised work in small groups; individual self-study on campus; individual self-study at a distance; etc.

In conventional teaching-learning situations, the presence of ICT does not suppose great transformations. However, these new media are integrated in existing models enriching the educational process in two directions: the access to information and the exploitation of networks as a means of communication.

- In the first case, countless examples of information are available that may be useful and appropriate for different levels and situations of training: Images of other places on earth, documents, large bases data, teaching materials prepared in other latitudes, educational experiences etc. In this sense, the networks make up a dispersed, diverse and gigantic 'library'.
- In the second case, ICTs are used to carry out projects in common, in such a way that students are integrated into groups and communities that open the horizons of the classroom by contacting colleagues located in anywhere on the planet. One can broaden the horizons of our schools by giving students the opportunity to come into contact with fellow students' other places, from other countries, as well as a broader vision of the world and of its reality, etc. And, finally, it contributes to what in the educational world is known as collaborative learning from the moment it facilitates exchange and share information.

Through the study of the role of ICT in curricula, its application and consideration will provide innovation, updating and better methods of imparting knowledge. The research project has allowed identify a technology-supported application context that is important to apply for the better development of the new generations and academic training that they acquire in consideration of the set of values, beliefs, ethics and professional features that will help build your identity. Therefore, consideration will improve the preparation of the student in accordance with the current paradigms of education, specifying that educational innovation and update offer the elements for building better learning and training.

It can be affirmed that to a large extent, these uses have not yet fully reached our classrooms, and this should have consequences in the policy of equipment and infrastructures, but also in teachers and students. In the design of new environments, of new classrooms, the fundamental thing is not technological availability, must also consider the characteristics of the other elements of the instructional process and especially the user of learning. They are not the same users (they do not have the same learning needs, the same motivations, the same independence, work and professional situations, the same conditions and availabilities, etc.), or do not intend the same apprenticeships, those who learn from home, then those who do it while working or in a conventional educational centre. What is really important is the use of a variety of technologies from communication to provide the necessary flexibility to meet the needs of an individual in regards to social skills, and also to achieve effective learning environments, and to achieve interaction of students and teachers.

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